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The care and cure of dental phobia: the use of cognitive behavioural therapy to complement conscious sedation

by Tim Newton and Jennifer Gallagher

How can CBT help rehabilitate patients who suffer from severe anxiety about dental treatment?

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The use of conscious sedation with patients who have significant levels of dental anxiety has a long and illustrious history. The publication of *Standards for Conscious Sedation in the Provision of Dental Care* by the Intercollegiate Advisory Committee for Sedation in Dentistry in 2015 highlights the safety of this approach and its success in allowing patients to experience the benefits of dental care.[1] Research described by Wilson *et al* echoes this point, with 98% of patients completing their course of dental treatment.[2] However, although conscious sedation represents excellent *care* for the patient with dental phobia, does it provide a *cure*?

In this article, we will explore the complementary use of psychological approaches, specifically cognitive behavioural therapy (CBT), in order to rehabilitate individuals with dental phobia so that they may attend for dental treatment without the use of conscious sedation. We will commence by describing what CBT is and then look at the evidence that supports the use of CBT for rehabilitation of an individual's anxiety. Finally, we will explore how conscious sedation and CBT can be provided within the framework of a comprehensive service, and identify some of the resources that would be required to implement such an approach nationally.

What is cognitive behavioural therapy?

CBT is a psychological approach to solving problems. It is based on a large body of scientific evidence and combines two traditional forms of psychological therapy: cognitive therapy and behaviour therapy. CBT aims to empower people to solve problems through addressing their thoughts and behaviours, and seeking to determine whether these are helping or hindering the problem-solving process.

The cognitive element seeks to explore how the way in which we think about something affects the way we feel. The central tenet is that we feel what we think. For example, feelings of apprehension about visiting the dentist may be based on thoughts about a sense of loss of control, uncertainty, unpredictability and the perception of an inability to cope with the sensations (including pain) that will occur. Note that this is about addressing a broad range of thoughts regarding ability to cope, control and predictability rather than simply addressing the individual's knowledge about what will happen (although that may be a component of the cognitive approach).

The behavioural element is largely based on the principle of graded exposure – that is, the breaking down of the complex behaviour of attending the dentist and receiving treatment into its component parts, and then gradually introducing the patient to each element while acclimatising their anxiety response.

CBT is a problem-focused intervention, which requires close cooperation between practitioner and patient. It is not particularly concerned with the original cause of the problem, only insofar as beliefs about the cause may have an effect on current thoughts. CBT also involves the patient doing 'homework' outside of the formal sessions to strengthen the learning.

What is the evidence that CBT helps individuals to overcome their dental phobia?

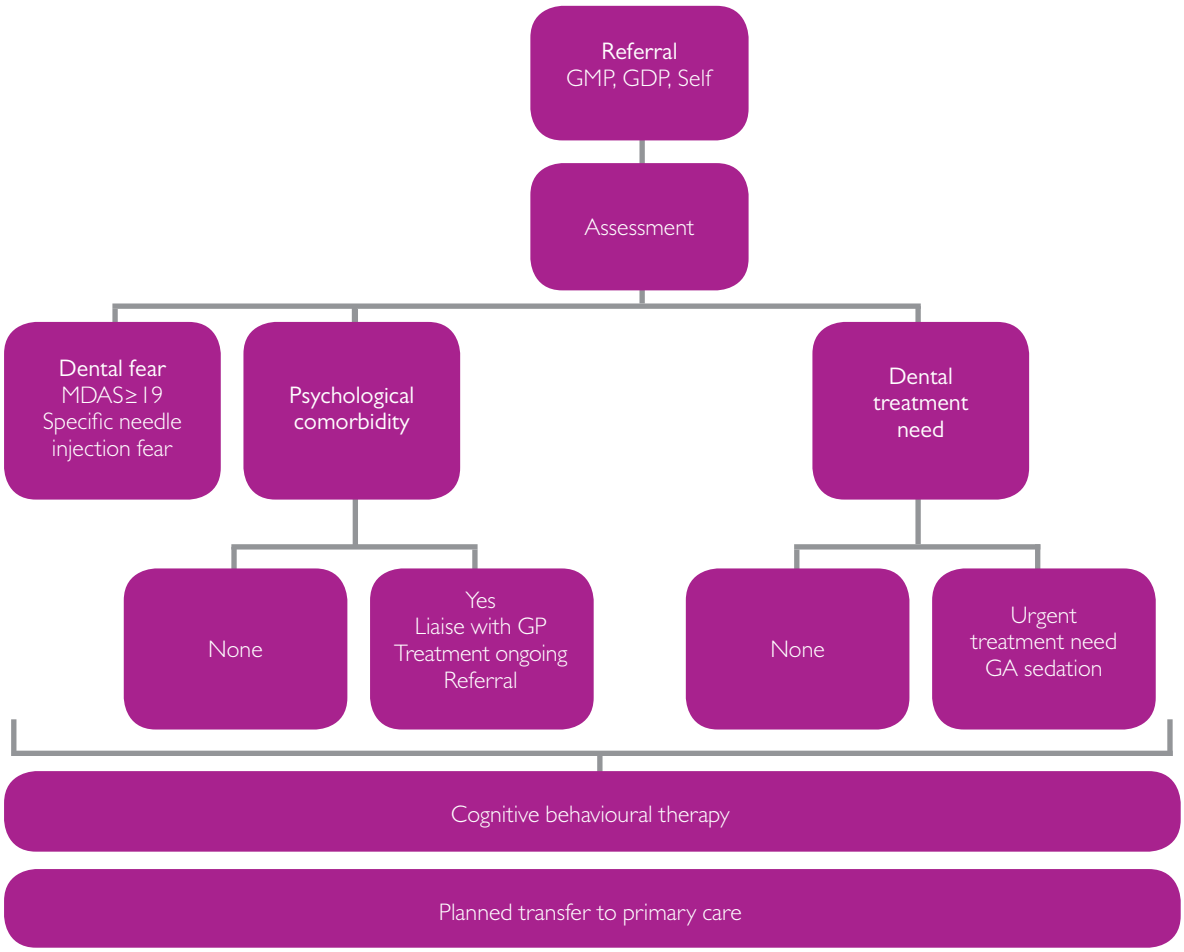
CBT has been described as 'the psychological therapy with the most solid and wide evidence base for efficacy and effectiveness'.[3] Research evidence supporting the use of CBT for phobia is both general and specific to dental phobia. Guidance on anxiety disorders from the National Institute for Health and Care Excellence strongly recommends the use of CBT for specific phobias as well as more general anxiety disorders.[4] Furthermore, the Department of Health has advocated using behaviour management in conjunction with sedation services in the management of dental fear.[5]

Kvale *et al* conducted a systematic review with meta-analysis of CBT for dental phobia with a specific focus on the behavioural aspects of therapy.[6] Over the 38 trials identified, the authors found that the intervention not only reduced self-reported dental anxiety (with an effect size of 1.78) but also improved long-term attendance at dental care. Seventy-seven per cent of those who had received CBT were 'regular' attenders at primary dental care at follow-up four years after the CBT treatment. More recently, Wide Boman *et al* concluded that CBT (including both behavioural and cognitive components) led to sustained decreases in self-reported dental fear, both compared with controls and with similar patients treated under sedation.[7]

There have been two published service evaluations of CBT for dental phobia in the UK. Kani *et al* reviewed the outcomes of 130 patients referred to a psychologist-led CBT service.[8] Of the 111 patients who completed CBT, 103 (93%) received dental treatment without sedation. The median number of CBT appointments attended per patient was 5. There were 19 patients (15%) who failed to complete their course of CBT: 12 were considered unsuitable for this type of therapy and 7 dropped out. The criteria for individuals being deemed unsuitable for CBT were: the presence of comorbid psychological difficulties such as suicidal ideation or intent, and/or excess alcohol use or depression. These were judged to take precedence for treatment over their dental fear. These findings suggest that a high proportion of those patients suitable for the CBT approach can be treated without sedation.

Similarly, a nurse-led CBT service based in Sheffield found a significant decrease in self-reported dental anxiety (from a mean modified dental anxiety scale [MDAS] score of 21.9 pre-CBT to 13.5 post-CBT) and an increase in oral health-related quality of life following attendance for CBT.[9] An MDAS score of ≥19 indicates a phobic level of fear so the average patient moved from a phobic level to a below phobic level of fear.

There is also evidence that people with dental phobia find the use of CBT acceptable. Using a vignette methodology, Forbes *et al* reported that patients attending



for dental treatment under conscious sedation felt that a psychological approach to overcoming their problem would be acceptable and would be willing to try such a technique.[10]

What would a service combining CBT and conscious sedation look like?

Given the argument that CBT is complementary to conscious sedation, a care pathway combining the two approaches would provide care and cure for patients with dental phobia. Figure 1 outlines the care pathway in place at the King's College London (KCL) Dental Institute, which delivers CBT-based services within the Department of Sedation and Special Care Dentistry at Guy's and St Thomas' NHS Foundation Trust. Patients with dental phobia may be referred either through general dental practitioners or through self-referral, and are screened for coexisting psychological problems that may take precedence over the dental phobia[8,11] and for urgent dental treatment needs. Pharmacological interventions are invaluable in ensuring the completion of dental treatment, as is referral to psychological services for comorbidities, with the option for follow-up through CBT services. Patients receive a course of CBT with a planned transfer to primary dental care for their ongoing dental treatment.

There is little evidence to suggest the ideal personnel to deliver CBT for dental phobia and reviews indicate that outcomes are largely independent of the professional group that delivers the service. In the UK, two models currently predominate: dental nurse-led services (usually supervised by a psychologist or other CBT-trained therapist) and psychologist-led services. Given the lack of difference in outcomes, nurse-led services probably represent the best value for money, with links to psychologists for supervision and appropriate management of complex cases.

Looking to the future, owing to the levels of dental anxiety in society and its impact on the oral health of those affected,[12,13] we need a trained workforce to deliver CBT for anxious dental patients and to support them in accessing healthcare with our expanding dental practice teams.

What resources would be required to implement this approach?

Setting up a CBT service for individuals with dental phobia will require trained personnel to deliver the service, facilities including non-clinical rooms for initial appointments and access to resources including assessment materials.

Personnel and training

For services employing either dental nurses with extended skills to deliver the service, trained counsellors or CBT-trained psychologists, all staff will probably require some training in the specific requirements of working with people with dental phobia. Dental nurses will be familiar with the range of equipment and procedures commonly used in dental treatments but psychologists may be less so. Likewise, dental nurses will require training in the specific techniques of CBT whereas the psychologists may be more familiar with these.

Psychologists and dental clinicians working at KCL and Guy's and St Thomas' NHS Foundation Trust (in conjunction with the Society for the Advancement of Anaesthesia in Dentistry) have developed a training manual for CBT in dental phobia.[14] Furthermore, training courses based on the manual are available, either as a tailored face-to-face course or as an online course. The latter offers a six-week introduction to the use of techniques based on CBT for the management of dental phobia (https://www1.kcl.ac.uk/prospectus/short-courses/list/keyword/dentistry). Course participants receive a copy of the course manual as well as resources and assessment materials to support the setting up and running of a CBT-based service. There are interactive tutorials and also ongoing support from clinicians working in the KCL Dental Institute CBT service.

Face-to-face courses are provided for dental services that are considering setting up a CBT element to their existing services. The course tutors are all psychologists working with individuals with dental phobia, with extensive experience of the development and management of such services. Advice can be tailored to the specific setting.*

Facilities

Individuals with a dental phobia will be reluctant to attend a dental setting, particularly a clinical dental environment. A neutral counselling room is essential to ensure that patients will feel comfortable.

Resources

Examples of patient information sheets, standard correspondence and assessment materials can be found in the manual devised by the KCL team,[14] and can be tailored to your particular service. The team has also developed a range of resources to support the cognitive and behavioural components of the therapy, such as MP3 recordings of dental instruments for patients to listen to as part of their homework to acclimatise them to the sounds of the surgery, and photographs of the surgery and equipment. All are available through the training provided by the KCL team.

Conclusions

CBT provides an effective therapeutic approach to overcome dental phobia. It is complementary to the use of conscious sedation, and ultimately leads to individuals overcoming their dental phobia and being able to attend primary dental care services. Resources exist for the development of services through the training of members of the dental team and in collaboration with psychologists.

For further details of the training, contact Dr Jennifer Hare (jennifer.hare@kcl.ac.uk) or Professor Tim Newton (tim.newton@kcl.ac.uk).

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